

*Lymnæa obrussa* Say. Wild Horse Creek, Spivey, Kansas; Sand Creek, Argonia, Kansas.

*Lymnæa parva* Lea. Tonkawa, Oklahoma.

*Lymnæa techella* Hald. Tonkawa, Oklahoma.

*Succinea avara* Say. Spring Creek, Anthony, Kansas.

*Succinea luteola* Gould. Tonkawa, Oklahoma.

*Agriolimax campestris* Binney. Tonkawa, Oklahoma.

*Polygyra fraterna* Say. Tonkawa, Oklahoma.

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THE MOLLUSCA OF DOUGLAS COUNTY, KANSAS. GASTEROPODA.

BY G. DALLAS HANNA.

(Concluded from p. 83.)

*Polygyra fraterna friersoni* Pilsbry. Very rare; a few specimens identical with specimens of this variety from southern Kansas have been found in this county.

*Bulinulus dealbatus* Say. This is evidently the form *liquabilis* Reeve, but I have not seen specimens of the subspecies to make comparison. It is found rather commonly on open rocky hillsides.

*Pupilla muscorum* Linnaeus. From river drift at Lawrence.

*Pupilla blandi* Morse. A few drift specimens have been picked up.

*Pupilla hebes* Ancey. Two specimens found in drift, one at Tecumseh and the other at Lawrence.

*Pupoides marginatus* Say. Common everywhere.

*Bifidaria procera* Say. Common in open places favorable for mollusks.

*Bifidaria procera cristata* P. & V. Rare this far east.

*Bifidaria hordeacella* Pilsbry. One specimen found in river debris at Lawrence.

*Bifidaria holzingeri* Sterki. Very rare; it gives way to the form *Bifidaria holzingeri fordiana* Sterki. Found in the woods of Blue Mound and elsewhere.

*Bifidaria contracta* Say. Common in timber lands.

*Bifidaria armifera* Say. Abundant.

*Bifidaria pentodon* Say. Found sparingly in the woods.

*Bifidaria tappaniana* C. B. Adams. Common on Blue Mound.

*Bifidaria agna* P. & V. Very rare; two specimens from drift debris of the Kansas river at Lawrence.

- Vertigo ovata* Say. Apparently rare.
- Vertigo milium* Gould. A few specimens came from Blue Mound.
- Vertigo tridentata* Wolf. Our commonest *Vertigo*; found on Blue Mound and in river drift at various places.
- Strobilops affinis* Pilsbry. Common in woody places.
- Vallonia parvula* Sterki. Very common where there is no shade.
- Vallonia costata* Müller. Drift specimens only have so far been found.
- Cochlicopa lubrica* Müller. Common on Blue Mound.
- Agriolimax campestris* Say. Not common.
- Agriolimax agrestis* Linnaeus. This is the common slug of Kansas.
- Vitrea rhoadsi* Pilsbry. This form is rather common in the woods.
- Vitrea indentata umbilicata* Cockerell. Abundant everywhere.
- Vitrea milium* Morse. This species is associated with *Z. minuscula*, but is less common in most places.
- Zonitoides arborea* Say. Abundant in all woods.
- Zonitoides nitida* Müller. Apparently a rare species and locally distributed. I have found it only near Lake View.
- Zonitoides minuscula* Binney. This species is common in open woodlands.
- Zonitoides minuscula alachuana* Dall. Found associated with the typical form but less common.
- Zonitoides singleyana* Pilsbry. A species of the open plains.
- Zonitoides nummus* Vanatta. Found at Lake View and at Blue Mound, in the woods on each occasion.
- Eucomulus chersinus trochulus* Reinhardt. Found in the woodlands with *Z. nummus*.
- Philomycus carolinensis* Bose. Rather common on Blue Mound. A number of specimens have been taken.
- Pyramidula alternata* Say. Abundant in wooded and rocky places.
- Pyramidula asteriscus* Morse. A few specimens have come from Blue Mound and more from river débris at various places in the county.
- Helicodiscus parallelus* Say. This species lives in colonies around the limestone bluffs altogether.
- Helicodiscus eigenmanni* Pilsbry. One specimen was picked out of drift from Lecompton; it probably washed there from farther west.
- Punctum pygmaeum* Draparnaud. Apparently rare, as it has only been found once, and then in river drift from Lawrence.

*Succinea avara* Say. Not common.

*Succinea grosvenori* Lea. Found in colonies in wet places.

*Succinea rusticana* Gould. Generally distributed, but it has not been found common.

*Succinea stretchiana* Bland. This is our common *Succinea*.

*Carychium exile* Lea. A colony of this species was found near the top of Blue Mound.

*Helicina occulta* Say. Drift specimens have been found at Lawrence in a situation that would lead one to suspect that it is a resident.

*Lymnea techella* Haldeman. Abundant in a drainage ditch south of Lawrence.

*Lymnea columella chalybea* Gould. Found in the Whitcomb greenhouse at Lawrence on the sides of flower-pots.

*Lymnea dalli* Baker. Found in the greenhouse with *L. columella chalybea* and also in river drift.

*Lymnea elodes* Say. One drift specimen is from Lawrence.

*Lymnea obrussa* Say. Rather common in a watercress spring west of Lawrence.

*Lymnea parva* Lea. Only a few specimens from river débris have been found.

*Lymnea reflexa* Say. This form used to be very common in Lake View, but the flood of 1903 swept almost all away.

*Lymnea reflexa crystalensis* Baker. Not common in this county.

*Planorbis bicarinatus* Say. Lake View and Rock Creek.

*Planorbis trivolvis* Say. Abundant in all ponds.

*Planorbis deflectus* Say. Lake View.

*Planorbis parvus* Say. A few specimens were found along the Kansas River.

*Physa anatina* Lea.

*Physa oleacea* Tryon. These two species were identified by Mr. Bryant Walker. All the specimens of this county seem referable to them.

*Annicola cincinnatiensis* Lea. Found in mud creek commonly.

*Annicola limosa* Say. A single dead shell from the Kansas River.

*Campeloma decisum* Say.

*Campeloma subsolidum* Anthony. These two forms live abundantly in the Wakarusa Creek, but are easily distinguishable.